REMARKS

The present mailing is responsive to the Examiner's Office Action mailed on March 16, 2005. Reconsideration of the present application is respectfully requested. Claims 1, 2, 7 and 46 have been amended. No claims have been canceled or added. No new matter has been added.

Claim Objections

In the Office Action mailed on 3/16/05, the Examiner objected to claims 1, 2 and 7 (see Office Action mailed 3/16/05, page 2). In view of the objections to claim 1, 2 and 7, amendments have been made to correct the informalities specified in the Office Action. Claim 46 has also been amended to correct an informality. The amendments to claim 1, 2, 7 and 46 are made only to correct minor informalities. The amendments are not made in response to the rejections or to comply with any statutory requirement of patentability, since no such amendments are believed to be necessary.

Claim Rejections

Independent claims 1, 16, 26, 30, 42 and 46 stand anticipated under 35 USC §102(e) based on US Patent no. 6,621,796 Miklos ("Miklos") (see Office Action mailed 3/16/05, page 3). To anticipate a claim, the cited reference must disclose each and every element of the claim. MPEP §2131. Applicant respectfully traverses these rejections.

Independent claim 1

Claim 1 recites:

1. A method, comprising:
regulating a flow of sequentially addressed data across a network between a source node and a destination node by limiting the number of units of said data traversing said network to a set called a window such that
units are added to said window because their transmission by said source is desired;
units are removed from said window because they have arrived at said destination;
units are removed from said window because they are declared to have been lost;
the total number of units within said window is bounded above by said limiting number of units of said data traversing said network;
the difference between the smallest address whose corresponding unit is contained within said window, and the largest address whose corresponding unit is contained within said window, is unbounded; and,
units are allowed to be noncontiguous.
(Emphasis added).

Applicant respectfully submits that Miklos fails at least to disclose the above emphasized claim language; and that, as a consequence, Miklos fails to anticipate claim 1. Therefore, claim 1 is patentable over Miklos.

In regulating a flow of sequentially addressed data across network between a source node and a destination node, units are usually transmitted sequentially from low address to high address. The above emphasized claim language allows a transmission window to contain two units, of which the difference between their addresses is **unbounded**. Thus, claim 1 regulates the amount of data allowed on the network at any given time without limiting the address range which may be transmitted; and, it allows the transmission window (which spans the address range) to advance forward so as to include high address units, to the extent of the window's size, for transmission, even

when the earliest portion of the window (the unit at the bottom of the window) has not yet been acknowledged such that the advancement causes the window to be non contiguous.

In contrast, although Miklos discusses a transmission window, the transmission window of Miklos does not advance until a unit at the very bottom of the transmission window is discarded. Said another way, Miklos limits address range which may be transmitted, in that the difference between the address of the bottom unit and the address of the top unit in the transmission window is **bounded** by the size of the window. For example, Miklos states:

> "Thus, for example, **when a PDU at the very bottom of the transmission window is discarded, the transmission window advances forward by one PDU**. However, as one skilled in the art will appreciate, the transmission window and the receiving window could be advanced on a data packet-by-data packet basis. In accordance with this alternative approach, **a PDU at the bottom of the transmission window** may be discarded, but the **transmission window does not advance until all of the PDUs associated with the corresponding data packet are discarded** (Column 8, line 60 – column 9, line 3)."
> (Emphasis added).

Similar statements can be found throughout Miklos; to name a few: col. 4, lines 19-33; col. 8, lines 31-35 & lines 54-57; etc.

In rejecting claim 1, the Examiner relies on Miklos Fig. 1B; col. 1, lines 37-44; col. 7, line 66-col. 8, line 24; col. 8, lines 58-66; and col. 10, line 55-col. 11, line 11. However, as discussed above, Fig. 1B and the discussion thereof (col. 7, line 53-col. 9, line 4) only teaches a transmission window which does not advance forward until a unit at the bottom of the window is discarded. As to col. 10, line 55-col. 11, line 11, Miklos states that a PDU with a high sequence number (which is equivalent to an address)

cannot be added into the transmission window if its sequence number exceeds the sequence number of the PDU at the bottom of the window plus the size of the window. Therefore, the transmission window does not advance forward unless a unit at the bottom is discarded, and that the difference between the address of the bottom unit and the address of the top unit in the transmission window is bounded by the size of the window. Therefore, Miklos fails to disclose an unbounded window mechanism.

Thus, because Miklos does not disclose the limitation that the difference between the smallest address whose corresponding unit is contained within said window, and the largest address whose corresponding unit is contained within said window, is unbounded, claim 1 and all claims which depend on it are not anticipated by Miklos.

Independent claim 16

Claim 16 recites:

> 16. A method that controls the transportation of an amount of data over a network, wherein, when said amount of data is viewed as being contiguous, such that a next piece of said amount of data is adjacent to a piece of said amount of data from the perspective of said piece of said amount of data, a window that is viewed as being superimposed upon said amount of data defines a specific portion of said amount data based upon a size of said window and a positioning of said window, said method comprising:
>
> allowing non contiguous portions of said amount of data to be in transit over said network such that:
>
> a first portion of said amount of data that is allowed to be in transit within said network can be viewed as being defined by a first window;
>
> a second portion of said amount of data that is allowed to be in transit within said network can be viewed as being defined by a second window, wherein said first and second windows can be viewed as being superimposed upon said amount of data such that a third portion of said amount of data that is not in transit within said network exists between said first window and said second window, said second portion having a next piece of said amount of data

from the perspective of a piece of said amount of data that is within said third portion; and

wherein:

1) **if: said next piece from the perspective of said piece within said third portion arrives at its destination causing said third portion to expand;**
2) **then: a next piece of said amount data from the perspective of said second portion is allowed to be in transit within said network causing said second window to slide.**

(Emphasis added).

Applicant respectfully submits that Miklos at least does not disclose the above emphasized limitations of claim 16. Therefore, claim 16 is allowable over Miklos.

Similar to claim 1, the above emphasized language essentially allows a new unit ("a next piece of said amount data from the perspective of said second portion") from the higher address portion of the data flow to be added into the window for transmission, even if the earliest portion ("the first portion of said amount of data") is not yet acknowledged (since the portion is still in transmission window). Thus, it allows the transmission window to slide forward even though the bottom of the window has not. This allows the difference between the address of the bottom unit and the address of the top unit to be unbounded; as a result, it does not limit the address range of the data to be transmitted.

As discussed above, Miklos, however, does not disclose such a window mechanism. Miklos' window advances forward only when the bottom of the window moves forward (i.e., the earliest portion of the window is acknowledged or discarded). Thus, because Miklos does not disclose each and every element of claim 16, claim 16 and all claims which depend on it are not anticipated by Miklos.

Independent claims 26 & 42

Claim 26 recites:

26. A method, comprising:
a) sending a message onto a network from a client to a server that requests a portion of an amount of data from said server wherein the total amount of said amount of data that is:
    1) requested by said client from said server through one or more messages and
    2) not received by said client is within a limit that controls how much of said amount of data is in transit on said network, said **limit being maintained by said client** and,
b) **starting a timer at said client that times how long it takes for any piece of said portion to be received at said client**; and
c) sending a second message from said client to said server for another portion of said amount of data, said sending a second message in response to a reception of at least a piece of said portion, said reception occurring no later than an expiration of said timer.
(Emphasis added).

Applicant respectfully submits that Miklos at least does not disclose the maintenance by the client of either the limit that controls how much of the amount of data is in transit or the timer that times how long it takes for any piece of a portion of data to be received.

First, in Miklos, the limit of how much of the amount of data is in transit is implicitly controlled by the transmission window's size maintained by the sender, not the receiver acting as a client.

Second, although Miklos discloses a timer on the receiver side, the timer is used to trigger PDU discarding (see Figures 1-2, col. 6, lines 29-32), not to measure how long it takes for any piece of a portion of data to be received.

Specifically, the Examiner relies on the same citations from Miklos in rejecting claim 26 as in rejecting claim 1. However, not only do the cited contents fail to disclose

the above limitations, but they also support the contrary (namely, maintaining the controls of how much data to be in transit on the sender acting as a server).

Thus, because Miklos does not disclose the maintenance by the client of either the limit that controls how much of the amount of data is in transit or the timer that times how long it takes for any piece of a portion of data to be received, claim 26 and all claims which depend on it are not anticipated by Miklos.

Similarly, claim 42 also recites the limitations emphasized above. Thus, at least for the same reasons, claim 42 and all claims which depend on it are not anticipated by Miklos.

Independent claims 30 & 46

Claim 30 recites:

> 30. A method, comprising:
> Tracking a plurality of portions of an amount of data over the course of a transaction in which said amount of data is eventually transported from a server to a client, said plurality of portions being tracked by said client consistent with the following set of characteristics:
> 1) those one or more portions that have been received from said server before the expiration of its timer.
> 2) those one or more portions for whom a requesting message has been sent onto said network from said client to said server and whose timer has not yet expired.
> 3) those one or more portions that are neither characteristic 1) or characteristic 2)
> wherein when said amount of data is viewed as being contiguous, such that a next piece of said amount of data is adjacent to a piece of said amount of data from the perspective of said piece of said amount of data, a first portion having characteristic 1) is between a second and third portions having characteristic 2).
> (Emphasis added).

Miklos does not disclose the tracking by the client of portions of an amount of data communicating between a client (acting as a receiver) and server (acting as a sender). The function of the receiver in Miklos is limited to the acceptance of data and the transmission of acknowledgements, negative or positive. For example, as illustrated in Figure 1A, 1B, and 4-6 in Miklos, the receiver sends an ACK message to the sender if a unit is received, and sends a NACK message to the sender if a unit is lost.

In contrast, tracking, as implicitly recited from the claim language itself involves more than keeping a note of which unit has arrived and which has not. Tracking involves more sophisticated comprehension of the details of the transaction in order to effect the claimed "characteristics" (e.g., tracking which portions correspond to which of characteristics 1), 2) and 3))..

Thus, because Miklos does not disclose each and every element of claim 30, claim 30 and all claims which depend on it are not anticipated by Miklos.

Similarly, claim 46 also recites the limitation emphasized above. Thus, at least for the same reasons discussed above, claim 46 and all claims which depend on it are not anticipated by Miklos.

Dependent Claims

In view of the above remarks, a specific discussion of the dependent claims is considered to be unnecessary. Therefore, Applicants' silence regarding any dependent claim is not to be interpreted as agreement with, or acquiescence to, the rejection of such claim or as waiving any argument regarding that claim.

Conclusion

For the foregoing reasons, the present application is believed to be in condition for allowance, and such action is earnestly requested.

If there are any additional charges, please charge Deposit Account No. 02-2666. If a telephone interview would in any way expedite the prosecution of this application, the Examiner is invited to contact Robert B. O'Rourke at (408) 720-8300.

Respectfully submitted,

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